



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants: Daniel Alvarez, Jr. and Jeffrey J. Spiegelman
Application No.: 10/692,018 Group Art Unit: 1724
Filed: October 23, 2003 Examiner: Unknown
Confirmation No.: 8519

Title: METHOD FOR PURIFICATION OF LENS GASES USED
IN PHOTOLITHOGRAPHY

| | |
|---|------------------------|
| CERTIFICATE OF MAILING OR TRANSMISSION | |
| I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as First Class Mail in an envelope addressed to Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, or is being facsimile transmitted to the United States Patent and Trademark Office on: | |
| 4/23/04 | <i>Linda Woodhouse</i> |
| Date | Signature |
| <i>LINDA WOODHOUSE</i> | |
| Typed or printed name of person signing certificate | |

INFORMATION DISCLOSURE STATEMENT

Mail Stop Missing Parts
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

This Information Disclosure Statement is submitted:

- ☐ under 37 CFR 1.129(a), or
(First/Second submission after Final Rejection)
- ☒ under 37 CFR 1.97(b), or
(Within any one of the following time periods: three months of filing national application (other than a CPA) or date of entry of the national stage in an international application; or before the mailing date of a first office action on the merits in a non-provisional application, including a CPA, or a Request for Continued Examination).
- ☐ under 37 CFR 1.97(c) together with either:
- ☐ a Statement under 37 CFR 1.97(e), as checked below, or
- ☐ a \$180.00 fee under 37 CFR 1.17(p), or
(After the 37 CFR 1.97(b) time period, but before final action or notice of allowance, whichever occurs first)
- ☐ under 37 CFR 1.97(d) together with:
- ☐ a Statement under 37 CFR 1.97(e), as checked below, and
- ☐ a \$180.00 fee under 37 CFR 1.17(p), or
(Filed after final action or notice of allowance, whichever occurs first, but on or before payment of the issue fee)
- ☐ under 37 CFR 1.97(i):
Applicant requests that the IDS and cited reference(s) be placed in the application filewrapper.
(Filed after payment of issue fee)

Statement Under 37 CFR 1.97(e)

- ☐ Each item of information contained in this Information Disclosure Statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this Information Disclosure Statement; or
- ☐ No item of information contained in this Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the undersigned, after making reasonable inquiry, no item of information contained in the information disclosure statement was known to any individual designated in 37 CFR 1.56(c) more than three months prior to the filing of this Information Disclosure Statement.

Statement Under 37 CFR 1.704(d) (Patent Term Adjustment)

Applies to original applications (other than design) filed on or after May 29, 2000

- ☐ Each item of information contained in the Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart application and this communication was not received by any individual designated in § 1.56(c) more than thirty days prior to the filing of the Information Disclosure Statement.
- ☒ Enclosed herewith is form PTO-1449:
- ☐ Copies of the cited references are enclosed.
- ☐ Since this application was filed after June 30, 2003, copies of issued U.S. patents and published U.S. applications are not required and are not being provided.
- ☒ Copies of the cited references are enclosed except those entered in prior application, U.S. Application No. 10/078,716, now U.S. Patent No. 6,645,898 B2 issued November 11, 2003 and U.S. Application No. 09/824,383, now U.S. Patent No. 6,391,090 B1 issued May 21, 2002, to which priority under 35 U.S.C. 120 is claimed. The earlier application contains copies of the cited references.
- ☐ The listed references were cited in the enclosed International Search Report in a counterpart foreign application.
- ☒ The "concise explanation" requirement (non-English references) for reference AL under 37 CFR 1.98(a)(3) is satisfied by:
- ☐ the explanation provided on the attached sheet.
- ☐ the explanation provided in the Specification.
- ☐ submission of the enclosed International Search Report.
- ☐ submission of the enclosed English-language version of a foreign Search Report and/or foreign Office Action.
- ☒ the English language abstract on the published PCT application.

☐ Applicant requests that the following non-published pending applications be considered:

Examiner's
Initials

____ U.S. Patent Application No. [], by [inventor(s)], filed [], Docket No.: []
____ U.S. Patent Application No. [], by [inventor(s)], filed [], Docket No.: []
____ U.S. Patent Application No. [], by [inventor(s)], filed [], Docket No.: []

Examiner

Date

- ☐ A copy of each above-cited application, including the current claims, is enclosed.
- ☐ A copy of each above-cited application, including the current claims, is enclosed, except those entered in prior application, U.S. Application No. [], to which priority under 35 U.S.C. 120 is claimed.

The Examiner is requested to return a copy of the above list of pending applications indicating which references were considered with the next office communication.

It is requested that the information disclosed herein be made of record in this application.

Method of payment:

- ☐ A check for the fee noted above is enclosed, or the fee has been included in the check with the accompanying Reply. A copy of this Statement is enclosed.
- ☐ Please charge Deposit Account 08-0380 in the amount of \$[]. A copy of this Statement is enclosed.
- ☒ Please charge any deficiency in fees and credit any overpayment to Deposit Account 08-0380.

Respectfully submitted,

HAMILTON, BROOK, SMITH & REYNOLDS, P.C.

By Alice O. Carroll
Alice O. Carroll
Registration No.: 33,542
Telephone: (978) 341-0036
Facsimile: (978) 341-0136

Concord, MA 01742-9133
Dated: April 23, 2004

PTO-1449 REPRODUCED

INFORMATION DISCLOSURE CITATION
IN AN APPLICATION

April 23, 2004

(Use several sheets if necessary)

ATTORNEY DOCKET NO.
3194.1022-002
(7184-PA13C)APPLICATION NO.
10/692,018FIRST NAMED INVENTOR
Daniel Alvarez, Jr.FILING DATE
October 23, 2003

EXAMINER

CONFIRMATION NO.
8519GROUP
1724

U.S. PATENT DOCUMENTS

| EXAM- INER INI- TIAL | REF. NO. | DOCUMENT NUMBER Number-Kind Code (if known) | ISSUE DATE / PUBLICATION DATE MM-DD-YYYY | NAME OF PATENTEE OR APPLICANT OF CITED DOCUMENT |
|-------------------------------|-------------|--|--|--|
| | AA | 5,685,895 | 11-11-1997 | Hagiwara <i>et al.</i> |
| | AB | 5,910,292 | 6-8-1999 | Alvarez, Jr. <i>et al.</i> |
| | AC | 6,059,859 | 5-9-2000 | Alvarez, Jr. <i>et al.</i> |
| | AD | 6,103,206 | 8-15-2000 | Taylor, Jr. <i>et al.</i> |
| | AE | 4,855,276 | 8-8-1989 | Osborne <i>et al.</i> |
| | AF | 5,607,647 | 3-4-1997 | Kinkead |
| | AG | 4,663,300 | 5-5-1987 | Lester <i>et al.</i> |
| | AH | 4,735,927 | 4-5-1988 | Gerdes <i>et al.</i> |
| | AI | 4,798,813 | 1-17-1989 | Kato <i>et al.</i> |
| | AJ | 4,869,735 | 9-26-1989 | Miyazawa <i>et al.</i> |
| | AK | 5,171,422 | 12-15-1992 | Kirker <i>et al.</i> |
| | AA2 | 5,328,672 | 7-12-1994 | Montreuil <i>et al.</i> |
| | AB2 | 5,430,000 | 7-4-1995 | Timken |
| | AC2 | 6,114,268 | 9-5-2000 | Wu <i>et al.</i> |
| | AD2 | 6,569,394 B2 | 5-27-2003 | Fischer <i>et al.</i> |
| | AE2 | 6,576,587 B2 | 6-10-2003 | Labarge <i>et al.</i> |
| | AF2 | 6,645,898 B2 | 11-11-2003 | Alvarez, Jr. <i>et al.</i> |
| | AG2 | 6,391,090 B1 | 5-21-2002 | Alvarez, Jr. <i>et al.</i> |
| | AH2 | | | |
| | AI2 | | | |
| | AJ2 | | | |
| | AK2 | | | |
| | AA3 | | | |
| | AB3 | | | |
| | AC3 | | | |

EXAMINER

DATE CONSIDERED

| | | | | |
|--|---|--|--|----------------------|
| PTO-1449 REPRODUCED INFORMATION DISCLOSURE CITATION IN AN APPLICATION April 23, 2004 (Use several sheets if necessary) | ATTORNEY DOCKET NO. 3194.1022-002 (7184-PA13C) | | APPLICATION NO. 10/692,018 | |
| | FIRST NAMED INVENTOR Daniel Alvarez, Jr. | | FILING DATE October 23, 2003 | |
| | EXAMINER | | CONFIRMATION NO. 8519 | GROUP 1724 |

FOREIGN PATENT DOCUMENTS

| | | DOCUMENT NUMBER Country Code-Number-Kind Code (if known) | DATE MM-DD-YYYY | NAME OF PATENTEE OR APPLICANT OF CITED DOCUMENT | TRANSLATION YES NO | |
|--|-----|--|--------------------|--|-----------------------|--|
| | AL | WO 88/02659 | 04-21-1988 | Steuler-Industriewerke GmbH | X | |
| | AM | | | | | |
| | AN | | | | | |
| | AO | | | | | |
| | AP | | | | | |
| | AQ | | | | | |
| | AL2 | | | | | |
| | AM2 | | | | | |
| | AN2 | | | | | |
| | AO2 | | | | | |
| | AP2 | | | | | |
| | AQ2 | | | | | |
| | AL3 | | | | | |
| | AM3 | | | | | |
| | AN3 | | | | | |
| | AO3 | | | | | |
| | AP3 | | | | | |
| | AQ3 | | | | | |
| | AL4 | | | | | |
| | AM4 | | | | | |
| | AN4 | | | | | |
| | AO4 | | | | | |
| | AP4 | | | | | |
| | AQ4 | | | | | |

| | |
|-----------------|------------------------|
| EXAMINER | DATE CONSIDERED |
|-----------------|------------------------|

| | | | | |
|---|--|--------------------------|---------------------------------|--|
| PTO-1449 REPRODUCED INFORMATION DISCLOSURE CITATION IN AN APPLICATION April 23, 2004 (Use several sheets if necessary) | ATTORNEY DOCKET NO. 3194.1022-002 (7184-PA13C) | | APPLICATION NO. 10/692,018 | |
| | FIRST NAMED INVENTOR Daniel Alvarez, Jr. | | FILING DATE October 23, 2003 | |
| | EXAMINER | CONFIRMATION NO. 8519 | GROUP 1724 | |

| OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.) | | |
|--|---|--|
| AR | Dallas, Andrew J., <i>et al.</i> , "Protecting the DUV Process and Optimizing Optical Transmission", <i>Meterology, Inspection, and Process Control for Microlithography XIV</i> , Neal T. Sullivan, Editor, Proceedings of SPIE, Vol. 3998, pages 863-74 (2000). | |
| AS | Holmes, S. J., <i>et al.</i> , "Manufacturing with DUV Lithography", <i>IBM Journal of Research and Development</i> , Vol. 41, Optical Lithography (1997). | |
| AT | Kishkovich, Oleg, <i>et al.</i> , "Real-Time Methodologies for Monitoring Airborne Molecular Contamination in Modern DUV Photolithography Facilities", <i>SPIE Conference on Meterology, Inspection, and Process Control in Microlithography XIII</i> , Vol. 3677, pages 348-76 (March 1999). | |
| AU | Koshkovich, Oleg, <i>et al.</i> , "An Accelerated Testing Technique for Evaluating Performance of Chemical Air Filters for DUV Photolithographic Equipment", <i>SPIE Conference on Meterology, Inspection, and Process Control in Microlithography XIII</i> , Vol. 3677, pages 857-65 (March 1999). | |
| AV | MacDonald, Scott A., <i>et al.</i> , "Airborne Contamination of a Chemically Amplified Resist 1 Identification of Problem", <i>Chem. Mater</i> , Vol. 5, pages 348-56 (1993). | |
| AW | Zhu, Sheng-Bai, "Contamination Control During Sh8pp8ng, Handling and Storage of Reticles", <i>Meterology, Inspection, and Process Control for Microlithography XIV</i> , Neal T. Sullivan, Editor, Proceedings of SPIE, Vol. 3998, pages 565-72 (2000). | |
| AX | Ullmans' <i>Encyclopedia of Industrial Chemistry, Completely Revised Fifth Edition</i> , Editors Barbara Elvers and Stephen Hawkins, Vol. 28A, pages 475-90 (1985). | |
| AY | Kirk-Othmer <i>Encyclopedia of Chemical Technology, Third Edition</i> , Vol. 15, pages 639-55, 1339-69 (1978). | |
| AZ | | |
| AR2 | | |
| AS2 | | |
| AT2 | | |

| | |
|----------|-----------------|
| EXAMINER | DATE CONSIDERED |
|----------|-----------------|